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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,822	10/23/2003	Ahmad M. El Husseini	50037.199US01	6329

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EXAMINER	
DAGOSTA, STEPHEN M	

ART UNIT	PAPER NUMBER
2683	

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/691,822	EL HUSSEINI ET AL.	
	Examiner	Art Unit	
	Stephen M. D'Agosta	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-7 and 10-20* is/are rejected.

7)☒ Claim(s) *8 and 9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-20 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 6,901,357 (Patiejunas). Although the conflicting claims are not identical, they are not patentably distinct from each other because they both deal with simulating network connection characteristics. While the applicant focuses on an emulator/simulator for cellular systems, Patiejunas discloses an emulator/simulator for packet-based communications (which is supported in cellular systems). Patiejunas also discloses "wireless communications" as well:

1. Reference cited:

"..Elan Amir, Hari Balakrishnan, Srinivasan Seshan, Randy H. Kratz, "Efficient TCP over Networks with Wireless Links", Proceedings of HotOS-V, Orcas Is., WA, May 1995, 6 pages..."

2. Teaching from specification:

"...Each of the clients (206, 218, 230) is connected to a network path 248 through a first network connection 254, a second network connection 260 and third network connection 266,

respectively. Similarly, the target server 242 is connected to the network path 248 through a server network connection 272. For example, the network path 248 and network connections (254, 260, 266) may include network interface cards (NIC) and physical media that connect computers within the network (such as cabling as well as wireless communications)…". (C6, L22-32)

Hence the primary examiner concludes that the internal workings of the Patiejunas design would be modified by one skilled in the art to fully support cellular communications as disclosed by Husseini et al (10-691822).

→ The primary examiner also notes for the record that the assignee, and one of the inventors (Shawn Kashyap) also have another patent application which is similar in nature as well, eg. a SIM emulator. Refer to US 2005/0131671.

Drawings

Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (***these appear to be known in the art***).
See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7, 10-16 and 18-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Yehushua et al. US 5,504,800 and further in view of Ryzl US 2002/0169591.

As per **claims 1, 10 and 20,** Yehushua teaches a method for emulating a telephony link to be used in a mobile device (title is automated test set), comprising:

sending a command to an emulation telephony device (see Abstract, figure 1 shows device under test and PAW which is a BTS simulator, C4, L22-35);

translating the command to a network request and modeling an expected response to the network request and sending the expected response (see figures 4 and 5 which show various messages/requests being sent and the expected responses),

but is silent on emulating a telephony driver to test an application to be used in a mobile phone AND commands emanating from an application to the emulation telephony driver.

The primary examiner notes that device drivers are well known in the art and provide the link between software and hardware so that commands are properly executed in hardware. Further, Yehushua's test system would require installation of software in the mobile so that it can communicate with the BTS and/or with a server if the mobile had client software application(s) installed, eg. client/server software.

Lastly the primary examiner puts forth **Ryzl**, who discloses a module for developing wireless device applications using an integrated emulator (title, abstract and figures 0-10, 12-14 and 20) whereby an application is created via development tools and integrated with an emulator designed to execute in a wireless environment (P#0019 as well as P#0020-#0021). Figure 14 shows editing/compiling/preverification (ST#112-116 and P#0059) of application(s).

With further regard to claim 10, Yehushua **is silent on** an application layer that is arranged to store the application to be tested; a cellular core coupled to the application layer, that is arranged to receive a command associated with the application to be tested from the application layer. **Ryzl** discloses a hierarchical layering of Operating System, OEM API's, Core API's, Virtual machine(s) in the J2ME technology (figure 6) and the Platform, Device Configuration(s), Device Profile(s), Applications, API's and OEM applications (figure 7), which reads on an application layer that stores the applications to be tested and being coupled to a cellular core which is arranged to

receive commands from said application layer. (The 7-layer OSI model is well known and includes the Application layer down thru the physical network connectivity layer).

It would have been obvious to one skilled in the art at the time of the invention to modify Yehushua, such that emulating a telephony driver to test an application to be used in a mobile phone AND commands emanating from an application to the emulation telephony driver, to provide means for testing a phone application's interaction with a cellular network prior to shipping the phone to the general public.

As per **claim 2,** Yehushua teaches claim 1, further comprising configuring the ETD such that the ETD simulates features supported by a wireless network (see figures 4-5 which show wireless features such as paging, channel assignment, handoffs, etc.).

As per **claim 3,** Yehushua teaches claim 1, further comprising updating at least one network setting in the ETD based on the network request such that the application to be tested is implemented in the ETD (figures 4-5 show different interactions between Unit under test (UUT) and BTS Simulator (PAW) and updates being supported, eg. figure 5 shows and handoff being performed and handoff ACK which inherently requires the system to change/update channels, and also SYNC messages being sent).

As per **claim 4,** Yehushua teaches claim 1 **but is silent on** further comprising preventing unauthorized testing.

Yehsushua discloses the BTS Simulator (PAW) is a processor/computer "such as an INTEL 386 microprocessor-based personal computer" (C4, L49-51). One skilled realizes that most computer operating systems provide means for Login Name and Password protection. Hence the examiner takes **Official Notice** that it is well known in the art for one skilled to password-protect a computer (eg. the PAW machine) to prevent unauthorized access to the system.

It would have been obvious to one skilled in the art at the time of the invention to modify Yehushua, such that comprising preventing unauthorized testing, to provide means for only allowing authorized persons to perform testing.

As per **claim 5,** Yehushua teaches claim 1, further comprising registering a call back address associated with the network request in the ETD (figure 4 shows Paging Messages and Responses being sent, which would include the phone number, eg. call back address, associated with the network requests).

As per **claim 6,** Yehushua teaches claim 5, wherein sending the response further comprises sending a success response to the registered call back address when modeling the response to the network request is successful (figure 5 shows use of the Acknowledgement (ACK) message indicating a successful command has been received and performed).

As per **claim 7,** Yehushua teaches claim 5 wherein sending the response further comprises sending a failure response to the registered call back address when modeling the network request is not successful.

Yehushua teaches sending a "no acknowledge" message to indicate a non-successful response (C10, L12-20). One skilled in art is familiar with ACK/NACK protocols which send "Acknowledgement" and "NO Acknowledgement" messages.

As per **claim 11,** Yehushua teaches claim 10, wherein the response is a response expected from a wireless network (title is a "cellular automated test set", see figure 1).

As per **claim 12,** Yehushua teaches claim 10, wherein the application layer comprises a user interface, the response being returned to the user interface (C5, L15-27 teaches testing audio quality via speaking into the microphone and listening at a speaker, which is a user interface).

As per **claim 13,** Yehushua teaches claim 10, **but is silent on** wherein the ETD simulates a wireless network by maintaining network features supported by the application to be tested

Yehushua does teach network features supported by the network and phone (see figures 4-5). As discussed in the rejection of claim 1, the examiner interprets the application as a client/server application which requires software to be installed at both the client/mobile and server, whereby the wireless network supports their RF data transmissions/interaction).

Ryzl teaches an application environment (figures 9-10) that is used in a wireless environment (figures 12-13 and Abstract).

It would have been obvious to one skilled in the art at the time of the invention to modify Yehushua, such that the ETD simulates a wireless network by maintaining network features supported by the application to be tested, to provide means for testing the interaction between both the phone and application to evaluate if the phone and application are ready for shipping to the general public.

As per **claim 14,** Yehushua teaches claim 10 **but is silent on** wherein the ETD comprises a control interface that is arranged to change a network feature associated with the application to be tested in the ETD.

Yehushua does teach (figures 4-5) the network and phone exchanging messaging during testing whereby network features can be changed (eg. during handoff or channel selection, etc.).

Ryzl teaches a Toolkit and emulator module (figure 9) and an environment (figure 10) whereby the emulator's environment and configurations can be changed (#69 and #70) during the lifecycle development (P#0059).

It would have been obvious to one skilled in the art at the time of the invention to modify Yehushua, such that the ETD comprises a control interface that is arranged to change a network feature associated with the application to be tested in the ETD, to provide means for varying phone network parameters as well as application parameters to evaluate how well the network/application operates during testing.

As per **claim 15,** Yehushua teaches claim 10, wherein the ETD comprises a control interface that is arranged to configure the ETD such that the application can be tested using network fault injection (Yehushua teaches support for network faults via ACK/NACK protocol, see figure 5, #506/508 and sending a "no acknowledge" message to indicate a non-successful response (C10, L12-20), eg. a network problem occurred).

As per **claim 16,** Yehushua teaches claim 10 **but is silent on** wherein the ETD comprises a configuration interface that is arranged to configure the ETD to support a network feature associated with the application to be tested.

Yehushua does teach (figures 4-5) the network and phone exchanging messaging during testing whereby network features would be used by the application.

Ryzl teaches a Toolkit and emulator module (figure 9) and an environment (figure 10) whereby the wireless network would support a network feature(s) associated with the application being tested (Abstract, P#0019-#0021).

It would have been obvious to one skilled in the art at the time of the invention to modify Yehushua, such that the ETD comprises a configuration interface that is arranged to configure the ETD to support a network feature associated with the application to be tested, to provide support for testing the phone operation as well as any application stored on the phone prior to shipping/selling the phone to the general public.

As per **claim 18,** Yehushua teaches claim 10, **but is silent on** wherein the ETD comprises a handset emulation module that is arranged to store information associated with a handset of the mobile device.

Ryzl teaches a mobile handset (figures 12-13 show a mobile handset) and figure 19 shows several "installation" steps (#160-#164) which requires storing/memory.

It would have been obvious to one skilled in the art at the time of the invention to modify Yehushua, such that the ETD comprises a handset emulation module that is arranged to store information associated with a handset of the mobile device, to provide means for the user to create/edit/store an application and then test it in a virtual test environment.

As per **claim 19,** Yehushua teaches claim 10, wherein the ETD comprises a telephony server emulation module that is arranged to emulate dialing a phone call (figures 1 and 4-5 show how the system is arranged and how it supports accessing a voice channel, which inherently requires "dialing a phone call").

Claim 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Yehushua and Ryzl and further in view of Brockel et al. US 5,794,128

As per **claim 17,** Yehushua teaches 10, **but is silent on** wherein the ETD comprises a network emulation module that is arranged to simulate problems and configurations associated with a wireless network.

Brockel teaches a realistic simulation of wireless transport systems (title) that comprises:

"...The preferred embodiment is a realistic modeling apparatus for simulation of wireless information transport systems comprising a data entry module, a communications traffic selection module, a driver database, and voice and data input modules furnishing a simulation input to a network simulation module. The network simulation module having communications realism effects, a DIS structure, a channel error-burst model to transmit random errors, and a multipath modeling module to integrate deterministic and stochastic effects. The multipath modeling module, having a digital radio model and a Terrain-Integrated Rough Earth Model, influences the simulation inputs forming a multipath output, which is adjusted by voice and data inputs to provide a realistic, real-time simulation output signal to a display module portraying the simulated communications network and link connectivity. The network simulation module, channel error-burst model and multipath modeling module comprise a number of computer programs..." (Abstract. Also see figures 1-3 and 5, and C1, L49-62).

It would have been obvious to one skilled in the art at the time of the invention to modify Yehushua, such that the ETD comprises a network emulation module that is arranged to simulate problems and configurations associated with a wireless network, to provide means for the user to test the device/application under a broad range of changing RF environments (eg. from optimal to non-optimal).

Allowable Subject Matter

Claims 8-9 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

For claim 8: The prior art of record does not disclose "..further comprising changing software code associated with the application..."

For claim 9: The prior art of record does not disclose: "..further comprising re-executing the network request after changing the software code associated with the application..."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Baker et al. US 6,859,922
2. Hill et al. US 6,272,450
3. Tran US 6,886,111
4. Bryger et al. US 2002/0176394
5. Somasegar et al. US 5,862,362
6. Patiejunas US 6,901,357
7. Kashyap et al. US 2005/0131671
8. Rackley et al. US 2004/0032833
9. Labedz et al. US 6,308,072

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta
Primary Examiner
8-9-2005